

**Imperial Valley Study Group  
Transmission Planning Collaborative  
Amended Meeting Minutes: April 12, 2005**

**Attendees:**

Frank Barbera - IID Energy	Jonathan Woldemariam – SDG&E
Juan C. Sandoval – IID	Robert Jackson – SDG&E
David Barajas – IID	Chris Terzich – SDG&E
Carrie Downey - IID	Rich Sheaffer – SDG&E
Kim Kiener - IID	Mark Etherton – IID
Son Hoang - LADWP	John Kyei - CAISO
Clare Laufenberg Gallardo – CEC	Phillip Leung – SCE
Greg Merrigan – CalEnergy	Dave Olsen – CEERT/CEC
Ken Bagley - CRT Committee	Dale Stevens – CalEnergy
Greg Griffith - Ormat	Susan Lee - Aspen Environmental
Duane Torgerson – WAPA	Lauren Weinstein - EPG
Richard Cabanilla - Imperial County Plng	David Lawhead - State Parks
Dan Perkins – Sierra Club	Jim Kritikson - consultant
Bill Powers – Border Power Plant Work Grp	Scott Debenham – Debenham Energy
Vince Signorotti - CalEnergy	Jesse Ante - CPUC

The meeting convened at 1:00 PM at Sempra in San Diego. Minutes were recorded by Dave Olsen.

**Minutes** of the February 10, 2005 meeting were approved. They will be posted on the IVSG website, [www.energy.ca.gov/ivsg/](http://www.energy.ca.gov/ivsg/).

**Transmission Study:** IVSG Technical Work Group members presented a status report on the power flow modeling underway. The TWG modeled 14 cases for Heavy Summer loads in 2104 for the initial study alternatives. After analyzing these results, the group decided to eliminate four of the initial seven alternatives. David Barajas of IID reviewed these study results, with a graphical depiction of the direction and magnitude of the flows. Jonathan Woldemariam of SDG&E explained the rationale for eliminating the four alternative routings, and the TWG's remaining study tasks and schedule. Power flow studies of the three remaining alternatives will be conducted for 2014 Light Autumn conditions. These are scheduled to be completed by April 30. Dynamic studies and production simulations of the best-performing alternatives will follow in May and June, 2005.

Bill Powers of the Border Power Plant Working Group asked whether the Study Group's transmission alternatives had considered upgrading Path 45, which connects the CFE/Mexico system to San Diego, as there are renewable resources which might be able to connect to an upgraded line in that corridor. The IVSG focus has been export of 2,000 MW of geothermal power from the Imperial Valley. Path 45 would not be directly involved in any solution to export such power, and so had not been considered. The potential interaction of IVSG upgrades with Path 45 upgrades are of concern, to the extent that increased flows from the Imperial Valley into

San Diego could delay or obviate upgrades to Path 45 and so negatively affect the ability to bring renewable resources into San Diego across that path.

Scott Debenham raised the concern that elimination of the 230 kV upgrade alternative for flows from the Imperial Valley into San Diego could foreclose options for accessing wind resources in the region, as it would be too expensive for relatively small wind projects to afford interconnection to a 500 kV system. TWG members explained that the 230 kV alternatives did not relieve congestion in the region and so provided no ratepayer benefit. IID pointed out that it has 92 kV lines in several parts of its system; it may be possible for wind projects to connect to those lines. Specific wind resource locations have not yet been identified. When they are, those locations can be overlaid on IID transmission system maps to explore interconnection possibilities.

After discussion, the IVSG accepted the Technical Work Group's recommendation to proceed with the study of the three remaining transmission alternatives. These are Alternative 2, a 500 kV interconnection from IID to San Diego-Central; Alternative 2A, the same as Alternative 2, but with an added interconnection to the Devers-Palo Verde #1 line at a new Indian Hills substation; and Alternative 3, a 500 kV interconnection from IID to San Diego-North.

**Steering Committee:** The IVSG is working to recommend a comprehensive development plan for the phased development of 2,000 MW of geothermal generation and all transmission necessary to export that power. This plan must recommend a permitting strategy for the entire development; an approach for phasing both permitting approvals and construction; and ownership, operation and funding of the transmission facilities. The IVSG formed a Steering Committee to develop this recommended plan and to guide the further work of the Study Group. The Steering Committee will be accountable to, and will report regularly to all stakeholders participating in the Study Group.

Steering Committee members will include IID; SDG&E; CalEnergy; CA ISO; CPUC; and the CEC. SCE and the Sierra Club-San Diego Chapter both expressed interest in serving on the Steering Committee as well; both will discuss this with their organizations to determine if the appropriate senior staff is available. The Steering Committee will establish its meeting schedule over the next week.

**Permitting Work Group:** At the request of CPUC CEQA staff, who could not attend the IVSG meeting April 12, Susan Lee of Aspen Environmental Group outlined CEQA requirements and the CPUC's CPCN and permit approvals process. This presentation is available on the IVSG website, [www.energy.ca.gov/ivsg/](http://www.energy.ca.gov/ivsg/).

The IVSG recommended development plan must include a strategy for permitting the entire phased project. The Study Group formed a Permitting Work Group (PWG) to identify all likely permitting requirements and devise an approach for consolidating and expediting these approvals. The PWG will inform and notify all affected agencies and other key interests of the IVSG development, and seek to involve them as appropriate. Richard Cabanilla and the Imperial County Planning Department has developed a list of such agencies and institutions; this will help the PWG to begin its work. IID expressed its interest in serving as the lead agency for all

permitting work. The CPUC has communicated that it is open to this suggestion; CEQA requirements for CPUC-jurisdictional utilities may need to be clarified.

By consensus of the Study Group, IID will chair the Permitting Work Group; Carrie Downey will represent IID. Other members will include: SDG&E (Chris Terzich); CalEnergy (Vince Signorotti); CPUC (Andrew Barnsdale); and the Border Power Plant Working Group (Bill Powers). The PWG will make every effort to involve the BLM in its work, and will invite the Imperial County Planning Department and other key agencies to participate as well. The PWG will establish its meeting schedule in the next few weeks. It must develop a permitting strategy in time to be included in the IVSG report now targeted to be completed June 30, 2005.

**Next IVSG Meeting:** The next meeting of the full Study Group is scheduled for Thursday June 2, 2005, 1:00 – 4:00 PM, at Sempra in San Diego.

The meeting was adjourned at 3:30 PM.

The following e-mail exchange is incorporated into the minutes of the April 12, 2005 meeting at the request of Bill Powers of the Border Power Plan Working Group. This addition was authorized by participants in the June 30, 2005 IVSG meeting in approving the minutes of the April 12 meeting.

**From:** Dave Olsen [mailto:[olsen@avenuecable.com](mailto:olsen@avenuecable.com)]  
**Sent:** Wednesday, April 20, 2005 5:40 PM  
**To:** Bill Powers; Jackson, Robert W.  
**Cc:** 'Lamb, Merrie J.'; 'Abed, Abbas M.'; [afinley@mw2h.com](mailto:afinley@mw2h.com); [alberto.gonzalez@cfe.gob.mx](mailto:alberto.gonzalez@cfe.gob.mx); [barrie.kokanos@aps.com](mailto:barrie.kokanos@aps.com); [billp@borderpowerplants.org](mailto:billp@borderpowerplants.org); [bkkeel@srpnet.com](mailto:bkkeel@srpnet.com); [bob@pmallc.net](mailto:bob@pmallc.net); [cadowney@san.rr.com](mailto:cadowney@san.rr.com); [cbruins@energy.state.ca.us](mailto:cbruins@energy.state.ca.us); [charles.vartanian@sce.com](mailto:charles.vartanian@sce.com); 'Terzich, Chris'; [cknauf@ca.blm.gov](mailto:cknauf@ca.blm.gov); [claufenb@caiso.com](mailto:claufenb@caiso.com); [cmurley@smud.org](mailto:cmurley@smud.org); 'Miller, David M. Jr. (CP52A)'; [davispower@sbcglobal.net](mailto:davispower@sbcglobal.net); [DBRYCE@lc.usbr.gov](mailto:DBRYCE@lc.usbr.gov); [dlawhead@parks.ca.gov](mailto:dlawhead@parks.ca.gov); [dlbarajas@iid.com](mailto:dlbarajas@iid.com); [drtorgerson@msn.com](mailto:drtorgerson@msn.com); [dstovall@ormat.com](mailto:dstovall@ormat.com); [fmbarbera@iidenergy.com](mailto:fmbarbera@iidenergy.com); [garry.chinn@sce.com](mailto:garry.chinn@sce.com); [GDMerrigan@midamerican.com](mailto:GDMerrigan@midamerican.com); [ggriffith@ormat.com](mailto:ggriffith@ormat.com); [gosteiger@iid.com](mailto:gosteiger@iid.com); 'Todus, Harold'; [igreen@caiso.com](mailto:igreen@caiso.com); [JA1@cpuc.ca.gov](mailto:JA1@cpuc.ca.gov); [jcsandoval@iid.com](mailto:jcsandoval@iid.com); [jgeesman@energy.state.ca.us](mailto:jgeesman@energy.state.ca.us); [jkritikson@yahoo.com](mailto:jkritikson@yahoo.com); [jkyei@caiso.com](mailto:jkyei@caiso.com); [jl@nafta-law.com](mailto:jl@nafta-law.com); [jmiller@caiso.com](mailto:jmiller@caiso.com); [john.berlin@ncpa.com](mailto:john.berlin@ncpa.com); 'Woldemariam, Jonathan'; [jose.santamaria@cfe.gob.mx](mailto:jose.santamaria@cfe.gob.mx); [jurgheuberger@imperialcounty.net](mailto:jurgheuberger@imperialcounty.net); [kbagley@rwbeck.com](mailto:kbagley@rwbeck.com); [kdeme@parks.ca.gov](mailto:kdeme@parks.ca.gov); [KL1@cpuc.ca.gov](mailto:KL1@cpuc.ca.gov); [kmkiener@iid.com](mailto:kmkiener@iid.com); [knoller@anaheim.net](mailto:knoller@anaheim.net); 'Brown, Linda P.'; [lweinstein@epgaz.com](mailto:lweinstein@epgaz.com); [mevans02@coral-energy.com](mailto:mevans02@coral-energy.com); [miguel.avila1@cfe.gob.mx](mailto:miguel.avila1@cfe.gob.mx); [mle@krsaline.com](mailto:mle@krsaline.com); [mohan.kondragunta@sce.com](mailto:mohan.kondragunta@sce.com); [moulton@wapa.gov](mailto:moulton@wapa.gov); [mrobledo@scppa.org](mailto:mrobledo@scppa.org); [mtheroux@jdmt.net](mailto:mtheroux@jdmt.net); [ODStevens@midamerican.com](mailto:ODStevens@midamerican.com); [ormatintl@ormat.com](mailto:ormatintl@ormat.com); [PERCIVAL@wapa.gov](mailto:PERCIVAL@wapa.gov); [perkydan@pacbell.net](mailto:perkydan@pacbell.net); [Phillip.Leung@sce.com](mailto:Phillip.Leung@sce.com); [rae@cpuc.ca.gov](mailto:rae@cpuc.ca.gov); [raul.adame@cfe.gob.mx](mailto:raul.adame@cfe.gob.mx); [rconnelly@lc.usbr.gov](mailto:rconnelly@lc.usbr.gov); 'Sheaffer, Richard A.'; [richardcabanilla@imperialcounty.net](mailto:richardcabanilla@imperialcounty.net); [robert.smith@aps.com](mailto:robert.smith@aps.com); 'Hill, Roger L. (CCOPS)'; [rwait@controltechnology.org](mailto:rwait@controltechnology.org); [sarachch@energy.state.ca.us](mailto:sarachch@energy.state.ca.us); [scott.anders@sdenergy.org](mailto:scott.anders@sdenergy.org); [scott@debenhamenergy.com](mailto:scott@debenhamenergy.com); [slee@aspeneg.com](mailto:slee@aspeneg.com); [Son.Hoang@ladwp.com](mailto:Son.Hoang@ladwp.com); [TBlair@sandiego.gov](mailto:TBlair@sandiego.gov); [tnguyen@caiso.com](mailto:tnguyen@caiso.com); [trf@cpuc.ca.gov](mailto:trf@cpuc.ca.gov); [vincent.signorotti@calenergy.com](mailto:vincent.signorotti@calenergy.com); [york@wapa.gov](mailto:york@wapa.gov)

**Subject:** RE: IVSG Minutes - April 12 Meeting

Colleagues,

In light of the substantial discussion of the Path 45 issues raised by Bill Powers, I think we can conclude that the minutes of the April 12 Imperial Valley Study Group meeting on this subject are fair and complete as drafted. Thanks to all of you who contributed to this discussion.

Dave

Hello Robert,

Thank you for the response. If Dave Olsen confirms the April 12 IVSG meeting notes are complete, that is good enough for me. I appreciate you pointing-out that Path 45 will be discussed at STEP meeting on April 27th. I will plan on attending the meeting.

Best regards,

Bill Powers, P.E.  
Chair, Border Power Plant Working Group  
4452 Park Blvd., Suite 209  
San Diego, CA 92116

tel: 619-295-2072

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**From:** Frank Barbera [mailto:fmbarbera@iidenergy.com]

**Sent:** Tuesday, April 19, 2005 9:49 AM

**To:** 'Bill Powers'; 'jkritikson'; 'Jackson, Robert W.'; 'Dave Olsen'

**Cc:** 'Lamb, Merrie J.'; 'Abed, Abbas M.'; afinley@mw2h2o.com; alberto.gonzalez@cfe.gob.mx; barrie.kokanos@aps.com; billp@borderpowerplants.org; bkkeel@srpnet.com; bob@pmallc.net; cadowney@san.rr.com; cbruins@energy.state.ca.us; charles.vartanian@sce.com; 'Terzich, Chris'; cknauf@ca.blm.gov; claufenb@caiso.com; cmurley@smud.org; 'Miller, David M. Jr. (CP52A)'; davispower@sbcglobal.net; DBRYCE@lc.usbr.gov; dlawhead@parks.ca.gov; dlbarajas@iid.com; drtorgerson@msn.com; dstovall@ormat.com; garry.chinn@sce.com; GDMerrigan@midamerican.com; ggriiffith@ormat.com; gosteiger@iid.com; 'Todus, Harold'; igreen@caiso.com; JA1@cpuc.ca.gov; jcsandoval@iid.com; jgeesman@energy.state.ca.us; jkyei@caiso.com; jlv@nafta-law.com; jmiller@caiso.com; john.berlin@ncpa.com; 'Woldemariam, Jonathan'; jose.santamaria@cfe.gob.mx; jurgheuberger@imperialcounty.net; kbagley@rwbeck.com; kdeme@parks.ca.gov; KL1@cpuc.ca.gov; kmkiener@iid.com; knoller@anaheim.net; 'Brown, Linda P.'; lweinstein@epgaz.com; mevans02@coral-energy.com; miguel.avila1@cfe.gob.mx; mle@krsaline.com; mohan.kondragunta@sce.com; moulton@wapa.gov; mrobledo@scppa.org; mtheroux@jdmtd.net; ODStevens@midamerican.com; olsen@avenuecable.com; ormatintl@ormat.com; PERCIVAL@wapa.gov; perkydan@pacbell.net; Phillip.Leung@sce.com; rae@cpuc.ca.gov; raul.adame@cfe.gob.mx; rconnelly@lc.usbr.gov; 'Sheaffer, Richard A.'; richardcabanilla@imperialcounty.net; robert.smith@aps.com; 'Hill, Roger L. (CCOPS)'; rwait@controltechnology.org; sarachch@energy.state.ca.us; scott.anders@sdenergy.org; scott@debenhamenergy.com; slee@aspenerg.com; Son.Hoang@ladwp.com; TBlair@sandiego.gov; tnguyen@caiso.com; trf@cpuc.ca.gov; vincent.signorotti@calenergy.com; york@wapa.gov

**Subject:** RE: Path 45 Mexico location not a hurdle RE: IVSG Minutes - April 12 Meeting

Dear Mr. Powers,

I just wanted to advise you of IID Energy's position on this subject. From our point of view the SDGE's Transmission Planning department already spent significant amount of time and money analyzing the

alternatives to add a transmission interconnection at 230 or 500kV from Imperial Valley substation to San Diego area. I don't believe it is fair to overlook this effort by simply stating that 25 million dollars in path 45 upgrades could have similar results to the IV-SDGE 500 kV line, particularly when there is about 80 miles of new double circuit 230 kV line through mountainous terrain that may not be considered in your estimate (I believe that a new double circuit transmission line between La Rosita and Tijuana is needed). In addition the reliability aspect becomes a concern when a new transmission line shares the same transmission corridor as the existing one.

Respectfully,  
Frank Barbera  
IID Energy Assistant Manager

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**From:** Bill Powers [mailto:bpowers@powersengineering.com]  
**Sent:** Monday, April 18, 2005 4:17 PM  
**To:** 'jkritikson'; 'Jackson, Robert W.'; 'Dave Olsen'  
**Cc:** 'Lamb, Merrie J.'; 'Abed, Abbas M.'; afinley@mw2h.com; alberto.gonzalez@cfe.gob.mx; barrie.kokanos@aps.com; billp@borderpowerplants.org; bkkeel@srpnet.com; bob@pmallc.net; cadowney@san.rr.com; cbruins@energy.state.ca.us; charles.vartanian@sce.com; 'Terzich, Chris'; cknauf@ca.blm.gov; claufenb@caiso.com; cmurley@smud.org; 'Miller, David M. Jr. (CP52A)'; davispower@sbcglobal.net; DBRYCE@lc.usbr.gov; dlawhead@parks.ca.gov; dlbarajas@iid.com; drtorgerson@msn.com; dstovall@ormat.com; fmbarbera@iidenergy.com; garry.chinn@sce.com; GDMerrigan@midamerican.com; ggriffith@ormat.com; gosteiger@iid.com; 'Todus, Harold'; igreen@caiso.com; JA1@cpuc.ca.gov; jcsandoval@iid.com; jgeesman@energy.state.ca.us; jkyei@caiso.com; jlv@nafta-law.com; jmiller@caiso.com; john.berlin@ncpa.com; 'Woldemariam, Jonathan'; jose.santamaria@cfe.gob.mx; jurgheuberger@imperialcounty.net; kbagley@rwbeck.com; kdeme@parks.ca.gov; KL1@cpuc.ca.gov; kmkiener@iid.com; knoller@anaheim.net; 'Brown, Linda P.'; lweinstein@epgaz.com; mevans02@coral-energy.com; miguel.avila1@cfe.gob.mx; mle@krsaline.com; mohan.kondragunta@sce.com; moulton@wapa.gov; mrobledo@scppa.org; mtheroux@jdm.net; ODStevens@midamerican.com; olsen@avenuecable.com; ormatintl@ormat.com; PERCIVAL@wapa.gov; perkydan@pacbell.net; Phillip.Leung@sce.com; rae@cpuc.ca.gov; raul.adame@cfe.gob.mx; rconnelly@lc.usbr.gov; 'Sheaffer, Richard A.'; richardcabanilla@imperialcounty.net; robert.smith@aps.com; 'Hill, Roger L. (CCOPS)'; rwait@controltechnology.org; sarachch@energy.state.ca.us; scott.anders@sdenergy.org; scott@debenhamenergy.com; slee@aspenerg.com; Son.Hoang@ladwp.com; TBlair@sandiego.gov; tnguyen@caiso.com; trf@cpuc.ca.gov; vincent.signorotti@calenergy.com; york@wapa.gov  
**Subject:** Path 45 Mexico location not a hurdle RE: IVSG Minutes - April 12 Meeting

Hello Jim,

I'm not sure the fact that Path 45 is in Mexico is a hurdle at all. Sempra Resources (SDGE parent) has built a 600 MW power plant and a 500 mmcf pipeline in Baja California recently, and intends to build a 1,000 mmcf liquefied natural gas receiving terminal in Baja shortly. Sempra has embraced energy infrastructure projects in Baja California. The 600 MW Sempra plant in Mexicali is under CAISO local control. There is no reason that two additional 230 kV lines strung on CFE towers on Path 45 in Mexico, towers that are only a few miles south of the border, could not also be under the primary control of SDGE if SDGE pays for the upgrade. SDGE would be first in the queue to use the new 230 kV lines, the benefit for Mexico is the CFE can use them as well when SDGE has spare capacity on the lines.

The conservative estimated cost to string additional 230 kV wires on the two parallel 230 kV Path 45 lines is \$25 million (based on cost data from the U.S.). Power flow capacity would increase from 800 MW to 2,000 MW. The CAISO cost estimate for the Devers to Palo Verde greenfield 500 kV line is nearly \$700 million, along a fairly benign path topographically and assuming some use of existing towers. The Miguel

substation as currently configured may in fact be a thermal bottleneck to the Path 45 upgrade. Presuming \$700 million is probably a reasonable ballpark guess for a greenfield 500 kV line from the I.V. substation to the proposed San Felipe substation and then on to SCE territory, you could do a lot of upgrading of the Miguel substation to improve thermal performance to add 1,200 MW of capacity (and reliability to the SWPL) at 1/10<sup>th</sup> the cost of the greenfield 500 kV line currently envisioned. The Path 45 upgrade could also be carried-out much more quickly than the proposed greenfield 500 kV project, given there would be no controversy surrounding the development of the transmission corridor and the wires would be strung on existing towers.

Regards,

Bill Powers  
Border Power Plant Working Group

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**From:** jkritikson [mailto:jkritikson@yahoo.com]

**Sent:** Monday, April 18, 2005 9:13 AM

**To:** 'Jackson, Robert W.'; 'Bill Powers'; 'Dave Olsen'

**Cc:** 'Lamb, Merrie J.'; 'Abed, Abbas M.'; afinley@mw2h2o.com; alberto.gonzalez@cfe.gob.mx; barrie.kokanos@aps.com; billp@borderpowerplants.org; bkkeel@srpnet.com; bob@pmallc.net; cadowney@san.rr.com; cbruins@energy.state.ca.us; charles.vartanian@sce.com; 'Terzich, Chris'; cknauf@ca.blm.gov; claufenb@caiso.com; cmurley@smud.org; 'Miller, David M. Jr. (CP52A)'; davispower@sbcglobal.net; DBRYCE@lc.usbr.gov; dlawhead@parks.ca.gov; dlbarajas@iid.com; drtorgerson@msn.com; dstovall@ormat.com; fmbarbera@iidenergy.com; garry.chinn@sce.com; GDMerrigan@midamerican.com; ggriffith@ormat.com; gosteiger@iid.com; 'Todus, Harold'; igreen@caiso.com; JA1@cpuc.ca.gov; jcsandoval@iid.com; jgeesman@energy.state.ca.us; jkyei@caiso.com; jlv@nafta-law.com; jmiller@caiso.com; john.berlin@ncpa.com; 'Woldemariam, Jonathan'; jose.santamaria@cfe.gob.mx; jurgheuberger@imperialcounty.net; kbagley@rwbeck.com; kdeme@parks.ca.gov; KL1@cpuc.ca.gov; kmkiener@iid.com; knoller@anaheim.net; 'Brown, Linda P.'; lweinstein@epgaz.com; mevans02@coral-energy.com; miguel.avila1@cfe.gob.mx; mle@krsaline.com; mohan.kondragunta@sce.com; moulton@wapa.gov; mrobledo@scppa.org; mtheroux@jdm.net; ODStevens@midamerican.com; olsen@avenuecable.com; ormatintl@ormat.com; PERCIVAL@wapa.gov; perkydan@pacbell.net; Phillip.Leung@sce.com; rae@cpuc.ca.gov; raul.adame@cfe.gob.mx; rconnelly@lc.usbr.gov; 'Sheaffer, Richard A.'; richardcabanilla@imperialcounty.net; robert.smith@aps.com; 'Hill, Roger L. (CCOPS)'; rwait@controltechnology.org; sarachch@energy.state.ca.us; scott.anders@sdenergy.org; scott@debenhamenergy.com; slee@aspenerg.com; Son.Hoang@ladwp.com; TBlair@sandiego.gov; tnguyen@caiso.com; trf@cpuc.ca.gov; vincent.signorotti@calenergy.com; york@wapa.gov

**Subject:** RE: Suggested clarifications to IVSG minutes RE: IVSG Minutes - April 12 Meeting

This is consistent with my recollection. The U.S. 230 kv alternative studied in the IVSG did not perform well, and it would be expected to perform better than a path 45 upgrade because it would deliver the power further into the SDG&E system than the path 45 alt which would dump the power into Miguel substation which is already congested. The path 45 alt would require sending up to 2000 MW of power down one line into Mexico only to bring it back from Mexico on another, it would involve another government and set of laws, have issues of financing, scheduling rights and ownership, as well as questions of wheeling pricing (i.e. MW-mile?). These would all impact what is perhaps the most critical issue, timing.

## Jim Kritikson

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**From:** Jackson, Robert W. [mailto:RWJackson@semprautilities.com]

**Sent:** Friday, April 15, 2005 6:30 PM

**To:** Bill Powers; Dave Olsen

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**Subject:** RE: Suggested clarifications to IVSG minutes RE: IVSG Minutes - April 12 Meeting

My memory of the discussion that took place at the Imperial Valley Study Group (IVSG) are accurately reflected in Dave Olson's proposed minutes.

I had understood that the IVSG had declined to pursue an upgraded Path 45 alternative.

An upgraded Path 45 alternative is one of dozens of alternatives studied by SDG&E in its Transmission Comparison Study (TCS) over the last 6 months, as an open stakeholder process through the STEP meetings.

Final results of this TCS are being presented April 27 at the next STEP Meeting. I hope you can make it.

An upgraded Path 45 alternative had not been included in the IVSG analysis because it had not performed well in the early thermal analysis of the TCS, it would add to Miguel congestion, it did not provide direct access to the Imperial Valley Geothermal, which is the focus of the IVSG. These early discussion included SDG&E, CAISO, IID, CFE and others.

The IVSG purpose to determine what upgrades are necessary to make 2000 MW of geothermal fully deliverable and dispatchable, regardless of the timing, and then to determine a phased in approach, which will most likely be triggered by geothermal development levels. The Path 42 upgrades mentioned by IID are part of the work IVSG is reviewing, as necessary to make this geothermal fully deliverable and dispatchable.

**Robert W. Jackson, PE**

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-----Original Message-----

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**To:** Dave Olsen

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**Subject:** Suggested clarifications to IVSG minutes RE: IVSG Minutes - April 12 Meeting

Hello Dave,

Thank you for serving as moderator of the April 12<sup>th</sup> IVSG meeting in San Diego. I think the minutes may need a bit of clarification. The following statements are made in the minutes:

*Bill Powers of the Border Power Plant Working Group asked whether the Study Group's transmission alternatives had considered upgrading Path 45, which connects the CFE/Mexico system to San Diego, as there are renewable resources which might be able to connect to an upgraded line in that corridor. The IVSG focus has been export of 2,000 MW of geothermal power from the Imperial Valley. Path 45 would not be directly involved in any solution to export such power, and so had not been considered.*

*After discussion, the IVSG accepted the Technical Work Group's recommendation to proceed with the study of the three remaining transmission alternatives. These are Alternative 2, a 500 kV interconnection from IID to San Diego-Central; Alternative 2A, the same as Alternative 2, but with an added interconnection to the Devers-Palo Verde #1 line at a new Indian Hills substation; and Alternative 3, a 500 kV interconnection from IID to San Diego-North.*

I am not sure these summary statements adequately reflect the discussion that occurred. I commented that the STEP options include the Path 45 upgrade alternative, and that there is a major debate underway in San Diego via the San Diego Area Governments (SANDAG) Energy Working Group to determine if the



500 kV greenfield line being pursued by SDGE is preferred over a second distinct alternative that avoids the environmental/land use controversy and expense of a greenfield 500 kV and assures the reliability of at least 1,200 MW of power, whether geothermal or combined-cycle, from the Imperial County – Mexicali area. The larger backdrop of this strategic transmission discussion is whether SDGE should continue on what is essentially a re-regulation path, incorporating the Mexicali export plants into the SDGE system, or whether the region would be better served by the “wholesale power markets” approach represented by 500 kV transmission corridors and much heavier reliance on power imports. The San Diego business, political, and public interest communities conclusively determined in 2003 that the preferred approach is local control represented by the re-regulation model. The *San Diego Regional Energy Strategy 2030* (July 2003) that is the end product of this multi-year planning process is available on the San Diego Regional Energy Office website at:  
<http://www.sdenergy.org/ContentPage.asp?ContentID=55&SectionID=54>

It was not clear to me that the IVSG was declining to pursue the Path 45 alternative when you asked for the group’s endorsement of the three 500 kV transmission alternatives. I actually got the impression you thought taking a close look at the Path 45 alternative was a good idea as we discussed the endorsement of the three 500 kV alternatives, given it is one of the options being evaluated in STEP and it is the focal point of much interest in the San Diego strategic energy planning community. I left the meeting with the impression that the IVSG would be including an analysis of the Path 45 alternative given its prominence in directly related strategic transmission planning venues.

IID commented during the discussion period that Path 42 will be upgraded from 600 MW to 1,600 MW capacity independent of the proposed 500 kV greenfield line to the west. That upgrade alone would seem to cover all realistically achievable geothermal development in the Salton Sea area over the next 15-20 years. There is no reliability backup transmission line for the existing Salton Sea geothermal now other than potentially the SWPL, it would seem hard to justify the expense of greenfield 500 kV simply to provide reliability backup to a resource that has operated for 20 years without such backup.

*SCE and the Sierra Club-San Diego Chapter both expressed interest in serving on the Steering Committee as well; both will discuss this with their organizations to determine if the appropriate senior staff is available.*

The Sierra Club understands that they are on the steering committee and will be assigning a person to be fully involved in the IVSG report preparation effort by next week.

Thank you for putting together the meeting notes so quickly and I look forward to working with you closely over the next two-and-a-half months.

Best regards,

Bill Powers, P.E.  
Chair, Border Power Plant Working Group  
619-295-2072

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**From:** Lamb, Merrie J. [mailto:MLamb@semprautilities.com]

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**Subject:** IVSG Minutes - April 12 Meeting

**Importance:** High

Colleagues,

Attached please find the draft minutes of the April 12, 2005 meeting of the Imperial Valley Study Group. Send any comments or corrections to Dave Olsen ([olsen@avenuecable.com](mailto:olsen@avenuecable.com)).

<<IVSG Minutes 4-12-05.doc>>

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